U.S. FOOD & DRUG ADMINISTRATION

Febuary 4, 2020

Robert R. Redfield, MD
Director
Centers for Disease Control and Prevention
1600 Clifton Rd., MS D-14
Atlanta, GA 30333

Dear Dr. Redfield:

This letter is in response to your request that the Food and Drug Administration (FDA) issue an Emergency Use Authorization (EUA) for emergency use of the Centers for Disease Control and Prevention (CDC) 2019-Novel Coronavirus (2019-nCoV) Real-Time Reverse Transcriptase (RT)-PCR Diagnostic Panel for the presumptive qualitative detection of nucleic acid from the 2019-nCoV in upper and lower respiratory specimens (such as nasopharyngeal or oropharyngeal swabs, sputum, lower respiratory tract aspirates, bronchoalveolar lavage, and nasopharyngeal wash/aspirate or nasal aspirate) collected from individuals who meet CDC criteria for 2019-nCoV testing, pursuant to Section 564 of the Federal Food, Drug, and Cosmetic Act (the Act) (21 U.S.C. §360bbb-3). Testing is limited to qualified laboratories designated by CDC and, in the United States, certified under the Clinical Laboratory Improvement Amendments of 1988 (CLIA), 42 U.S.C. § 263a, to perform high complexity tests.[1]

On Feburary 4, 2020, pursuant to Section 564(b)(1)(C) of the Act, the Secretary of the Department of Health and Human Services (HHS) determined that there is a public health emergency that has a significant potential to affect national security or the health and security of United States citizens living abroad, and that involves the 2019-nCoV. Pursuant to Section 564 of the Act, and on the basis of such determination, the Secretary of HHS then declared that circumstances exist justifying the authorization of emergency use of in vitro diagnostics for detection and/or diagnosis of the novel coronavirus (2019-nCoV) subject to the terms of any authorization issued under Section 564(a) of the Act.[2]

Having concluded that the criteria for issuance of this authorization under Section 564(c) of the Act are met, I am authorizing the emergency use of the CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel (as described in the scope Section of this letter (Section II)) in individuals who

[1] For ease of reference, this letter will refer to "qualified laboratories designated by CDC and, in the United States, certified under the Clinical Laboratory Improvement Amendments of 1988 (CLIA), 42 U.S.C. § 263a, to perform high complexity tests" as "authorized laboratories."

[2] U.S. Department of Health and Human Services, *Determination of a Public Health Emergency and Declaration that Circumstances Exist Justifying Authorizations Pursuant to Section 564(b) of the Federal Food, Drug, and Cosmetic Act, 21 U.S.C. § 360bbb-3*. Feburary 4, 2020.

meet CDC criteria for 2019-nCoV testing for the presumptive detection of 2019-nCoV by authorized laboratories, subject to the terms of this authorization.

I. Criteria for Issuance of Authorization

I have concluded that the emergency use of the CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel in individuals who meet CDC criteria for 2019-nCoV testing meets the criteria for issuance of an authorization under Section 564(c) of the Act, because I have concluded that:

1. The 2019-nCoV can cause a serious or life-threatening disease or condition, including severe respiratory illness, to humans infected by this virus;

2. Based on the totality of scientific evidence available to FDA, it is reasonable to believe that the CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel may be effective in diagnosing 2019-nCoV infection, and that the known and potential benefits of the CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel, when used for diagnosing 2019-nCoV infection, outweigh the known and potential risks of such product; and

3. There is no adequate, approved, and available alternative to the emergency use of the CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel for diagnosing 2019-nCoV infection.[3]

II. Scope of Authorization

I have concluded, pursuant to Section 564(d)(1) of the Act, that the scope of this authorization is limited to the use of the authorized CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel by authorized laboratories for the presumptive detection of 2019-nCoV in individuals who meet CDC criteria for 2019-nCoV testing.

The Authorized CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel

The CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel is for the presumptive detection of 2019-nCoV RNA in upper and lower respiratory specimens (such as nasopharyngeal or oropharyngeal swabs, sputum, lower respiratory tract aspirates, bronchoalveolar lavage, and nasopharyngeal wash/aspirate or nasal aspirate), and other authorized specimens collected from individuals who meet CDC criteria for 2019-nCoV testing. The testing procedure consists of nucleic acid extraction and purification from the human specimen using authorized extraction methods/instruments followed by real time RT-PCR, where the RNA is reverse transcribed into cDNA and then amplified using the primer sets and detected using specific probes. The real time reverse transcriptase (RT)-PCR is performed on the FDA cleared Applied Biosystems 7500 Fast Dx Real-Time PCR Instrument with SDS 1.4 software, or other authorized instruments or software.

The CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel includes the following materials or other authorized materials:

[3] No other criteria of issuance have been prescribed by regulation under Section 564(c)(4) of the Act.

- 2019-nCoV_N1, 2019-nCoV_N2 and 2019-nCoV_N3 vials containing primers and probes that target the nucleocapsid (N) gene and are designed for both universal detection of SARS-like coronavirus as well as specific detection of the 2019-nCoV
- RP vial containing the internal control primers and probes that target the Human RNase P gene
- nCoVPC vial containing the 2019-nCoV positive control used in the assay

The CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel also requires the use of additional authorized materials and authorized ancillary reagents that are not included with the test but are commonly used in clinical laboratories and are described in the authorized CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel Instructions for Use.

The CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel requires the following control materials, or other authorized control materials; all controls listed below must generate expected results in order for a test to be considered valid, as outlined in the CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel Instructions for Use:

- Human Specimen Control (HSC): A human cell culture preparation used as an extraction control and positive control for the RNase P primer and probe set that is extracted and tested concurrently with each specimen extraction run.
- Positive Control for 2019-nCoV (nCoVPC): Run with each batch of specimens. Monitors for failures of rRT-PCR reagents and reaction conditions.
- No Template Control (NTC): Nuclease-free water included in each run. Monitors for reagent and system contamination.
- RNase P (RP) control in clinical samples: The RP primer and probe set is included in each run to test for human RNase P, which controls for specimen quality and demonstrates that nucleic acid was generated by the extraction process.

The above described CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel, when labeled consistently with the labeling authorized by FDA, entitled "CDC 2019-Novel Coronavirus (2019-nCoV) Real-Time RT-PCR Diagnostic Panel Instructions for Use" (available at https://www.fda.gov/medical-devices/emergency-situations-medical-devices/emergency-use-authorizations), which may be revised by CDC in consultation with, and with concurrence of, the Division of Microbiology Devices (DMD)/Office of Health Technology 7 Office of In Vitro Diagnostics and Radiological Health (OHT7-OIR)/Office of Product Evaluation and Quality (OPEQ)/Center for Devices and Radiological Health (CDRH), is authorized to be distributed to and used by authorized laboratories under this EUA, despite the fact that it does not meet certain requirements otherwise required by applicable federal law.

The above-described CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel is authorized to be accompanied by the following information pertaining to the emergency use, which is required to be made available to healthcare providers and patients:

- Fact Sheet for Healthcare Providers: CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel

- Fact Sheet for Patients: CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel

I have concluded, pursuant to Section 564(d)(2) of the Act, that it is reasonable to believe that the known and potential benefits of the authorized CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel when used for the presumptive detection of 2019-nCoV and used consistently with the Scope of Authorization of this letter (Section II), outweigh the known and potential risks of such a product.

I have concluded, pursuant to Section 564(d)(3) of the Act, based on the totality of scientific evidence available to FDA, that it is reasonable to believe that the authorized CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel may be effective in the presumptive detection of 2019-nCoV, when used consistently with the Scope of Authorization of this letter (Section II), pursuant to Section 564(c)(2)(A) of the Act.

FDA has reviewed the scientific information available to FDA, including the information supporting the conclusions described in Section I above, and concludes that the authorized CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel, when used for detection of the 2019-nCoV in the specified population (as described in the Scope of Authorization of this letter (Section II)), meets the criteria set forth in Section 564(c) of the Act concerning safety and potential effectiveness.

The emergency use of the authorized CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel under this EUA must be consistent with, and may not exceed, the terms of this letter, including the Scope of Authorization (Section II) and the Conditions of Authorization (Section IV). Subject to the terms of this EUA and under the circumstances set forth in the Secretary of HHS's determination under Section 564(b)(1)(C) described above and the Secretary of HHS's corresponding declaration under Section 564(b)(1), the CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel described above is authorized to detect 2019-nCoV in individuals who meet CDC criteria for 2019-nCoV testing.

This EUA will cease to be effective when the HHS declaration that circumstances exist to justify the EUA is terminated under Section 564(b)(2) of the Act or when the EUA is revoked under Section 564(g) of the Act.

III. Waiver of Certain Requirements

I am waiving the following requirements for the CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel during the duration of this EUA:

- Current good manufacturing practice requirements, including the quality system requirements under 21 CFR Part 820 with respect to the design, manufacture, packaging, labeling, storage, and distribution of the CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel

- Labeling requirements for cleared, approved, or investigational devices, including labeling requirements under 21 CFR 809.10 and 21 CFR 809.30, except for the

intended use statement (21 CFR 809.10(a)(2), (b)(2)), adequate directions for use (21 U.S.C. 352(f)), (21 CFR 809.10(b)(5), (7), and (8)), any appropriate limitations on the use of the device including information required under 21 CFR 809.10(a)(4), and any available information regarding performance of the device, including requirements under 21 CFR 809.10(b)(12)

IV. Conditions of Authorization

Pursuant to Section 564(e) of the Act, I am establishing the following conditions on this authorization:

Centers for Disease Control and Prevention (CDC)

A. CDC will notify DMD/OHT7-OIR/OPEQ/CDRH in advance of any changes to the CDC criteria for 2019-nCoV testing.

B. CDC will make available the authorized CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel with the authorized labeling only to authorized laboratories. CDC may request changes to the authorized labeling. Such requests will be made by CDC in consultation with, and require concurrence of, DMD/OHT7-OIR/OPEQ/CDRH.

C. CDC will provide to authorized laboratories the authorized CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel Fact Sheet for Healthcare Providers and the authorized CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel Fact Sheet for Patients. CDC may request changes to the authorized CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel Fact Sheet for Healthcare Providers and the authorized CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel Fact Sheet for Patients. Such requests will be made by CDC in consultation with, and require concurrence of, DMD/OHT7-OIR/OPEQ/CDRH.

D. CDC will make available on its website the authorized CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel Fact Sheet for Healthcare Providers and the authorized CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel Fact Sheet for Patients.

E. CDC will inform authorized laboratories and relevant public health authorities of this EUA, including the terms and conditions herein, and any updates made to the CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel, authorized labeling and authorized Fact Sheets.

F. CDC will ensure that the authorized laboratories using the authorized CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel have a process in place for reporting test results to healthcare providers and relevant public health authorities, as appropriate.

G. Through a process of inventory control, CDC will maintain records of test usage.

H. CDC will collect information on the performance of the test. CDC will report to FDA any suspected occurrence of false positive and false negative results and significant

deviations from the established performance characteristics of the test of which CDC becomes aware.

I. CDC is authorized to make available additional information relating to the emergency use of the authorized CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel that is consistent with, and does not exceed, the terms of this letter of authorization.

J. CDC may request new Fact Sheets to accompany the CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel, if appropriate, and may request changes to such Fact Sheets. Such requests will be made by CDC in consultation with, and require concurrence of, Office of Counterterrorism and Emerging Threats (OCET)/Office of the Chief Scientist (OCS)/Office of the Commissioner (OC) and DMD/OHT7-OIR/OPEQ/CDRH.

K. CDC may request the addition of other instruments and associated software for use with the authorized CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel. Such requests will be made by CDC in consultation with, and require concurrence of, DMD/OHT7-OIR/OPEQ/CDRH.

L. CDC may request the addition of other extraction methods for use with the authorized CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel. Such requests will be made by CDC in consultation with, and require concurrence of, DMD/OHT7-OIR/OPEQ/CDRH.

M. CDC may request the addition of other specimen types for use with the authorized CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel. Such requests will be made by CDC in consultation with, and require concurrence of, DMD/OHT7-OIR/OPEQ/CDRH.

N. CDC may request the addition and/or substitution of other control materials for use with the authorized CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel. Such requests will be made by CDC in consultation with, and require concurrence of, DMD/OHT7-OIR/OPEQ/CDRH.

O. CDC may request the addition and/or substitution of other ancillary reagents and materials for use with the authorized CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel. Such requests will be made by CDC in consultation with, and require concurrence of, DMD/OHT7-OIR/OPEQ/CDRH.

P. CDC will evaluate the analytical limit of detection and assess traceability[4] of the CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel with any FDA-recommended reference material(s). After submission to FDA and DMD/OHT7-OIR/CDRH's review of and concurrence with the data, CDC will update its labeling to reflect the additional testing. Such labeling updates will be made in consultation with, and require concurrence of, DMD/OHT7-OIR/OPEQ/CDRH.

Q. CDC will track adverse events and report to FDA under 21 CFR Part 803.

[4] Traceability refers to tracing analytical sensitivity/reactivity back to an FDA-recommended reference material.

Authorized Laboratories

R. Authorized laboratories will include with reports of the results of the CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel, all authorized Fact Sheets. Under exigent circumstances, other appropriate methods for disseminating these Fact Sheets may be used, which may include mass media.

S. Authorized laboratories will perform the CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel as outlined in the CDC 2019-Novel Coronavirus (2019-nCoV) Real-Time RT-PCR Diagnostic Panel Instructions for Use. Deviations from the authorized procedures, including the authorized RT-PCR instruments, authorized extraction methods, authorized clinical specimen types, authorized control materials, authorized other ancillary reagents and authorized materials required to perform the CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel are not permitted.

T. Authorized laboratories will have a process in place for reporting test results to healthcare providers and relevant public health authorities, as appropriate.

U. Authorized laboratories will collect information on the performance of the test and report to DMD/OHT7-OIR/OPEQ/CDRH (via email: CDRH-EUA-Reporting@fda.hhs.gov) and CDC (respvirus@cdc.gov) any suspected occurrence of false positive or false negative results and significant deviations from the established performance characteristics of the test of which they become aware.

V. All laboratory personnel using the test must be appropriately trained in RT-PCR techniques and use appropriate laboratory and personal protective equipment when handling this kit, and use the test in accordance with the authorized labeling.

CDC and Authorized Laboratories

W. CDC and authorized laboratories will ensure that any records associated with this EUA are maintained until otherwise notified by FDA. Such records will be made available to FDA for inspection upon request.

Conditions Related to Advertising and Promotion

X. All advertising and promotional descriptive printed matter relating to the use of the authorized CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel shall be consistent with the Fact Sheets and authorized labeling, as well as the terms set forth in this EUA and the applicable requirements set forth in the Act and FDA regulations.

Y. All advertising and promotional descriptive printed matter relating to the use of the authorized CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel shall clearly and conspicuously state that:

- This test has not been FDA cleared or approved;

- This test has been authorized by FDA under an EUA for use by authorized laboratories;

- This test has been authorized only for the detection of nucleic acid from 2019-nCoV, not for any other viruses or pathogens; and

- This test is only authorized for the duration of the declaration that circumstances exist justifying the authorization of emergency use of in vitro diagnostic tests for detection and/or diagnosis of 2019-nCoV under Section 564(b)(1) of the Act, 21 U.S.C. § 360bbb-3(b)(1), unless the authorization is terminated or revoked sooner.

No advertising or promotional descriptive printed matter relating to the use of the authorized CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel may represent or suggest that this test is safe or effective for the detection of 2019-nCoV.

The emergency use of the authorized CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel as described in this letter of authorization must comply with the conditions and all other terms of this authorization.

V. Duration of Authorization

This EUA will be effective until the declaration that circumstances exist justifying the authorization of the emergency use of in vitro diagnostic tests for detection and/or diagnosis of 2019-nCoV is terminated under Section 564(b)(2) of the Act or the EUA is revoked under Section 564(g) of the Act.

Sincerely,

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RADM Denise M. Hinton
Chief Scientist
Food and Drug Administration

Enclosures